Remarks

Claims 1-13, 15-31, 33, 35-52, 54-58 and 60-69 are pending in the present application.

The Examiner has rejected Claims 1-13, 15-31, 33, 35-52, 54-58 and 60-69 under 35 U.S.C. 102(e) as being unpatentable over U.S. Patent No. 6,202,207 to Donohue.

Claim 1 is directed to a computer-implemented method of locating one or more remote databases containing a desired type of data, comprising the steps of:

searching for at least one remote database accessible via a network of computer systems;

determining whether each remote database found during the searching is comprised of the desired type of data, wherein the desired type of data is time series data; and

storing location information for each remote database found during the searching if the remote database is comprised of the desired type of data.

Donohue does not disclose each and every element of Claim 1. Indeed, Donohue does not disclose any of the elements of Claim 1. Rather, Donohue discloses a method and mechanism for automatic updating of computer programs and synchronizing updates of computer programs and their pre-requisite programs to maintain interoperability. (Abstract.) Donohue makes no mention whatsoever of searching for a remote database comprised of time series data.

The Office Action asserts that Donohue discloses the step of determining whether each remote database found during the searching is comprised of the desired type of data, wherein the desired type of data is time series data. This is not correct.

Submitted herewith is the Declaration of Douglas A. Graham (the "Graham Declaration"), who has 40 years of experience in the field of data analysis theory, with academic degrees in Mathematics and Engineering, and who has performed hundreds of analyses covering

all types of micro-economic level of individual company financial and economic data time series, national level economic time series data, and global data time series modeling covering foreign countries and international trade flows. Graham Declaration at ¶ 2.

According to the Graham Declaration, the phrase "time series data" is understood to mean a data set having multiple data points, each of which is associated with a point in time. This definition, which is discussed in the Specification at p. 5, lines 18-20, is consistent with the leading treatises on statistics and forecasting, including, Time Series: Theory and Methods, Second Edition (1996), Peter J. Brockwell and Richard A. Davis, Chapter 1, Stationary Time Series, 1.1 Examples of Time Series, page 1, which defines a "time series" as follows: "A time series is a set of observations **X***t*, each one being recorded at a specified time *t*," and The Analysis of Time Series, An Introduction, Sixth Edition (2004), Chris Chatfield, Chapter 1, Introduction, 1.1 Some Representative Time Series, page 1, which states as follows: "A time series is a collection of observations made sequentially through time. Many time series are routinely recorded in economics and finance. Examples include share prices on successive days, export totals in successive months, average incomes in successive months, company profits in successive years, and so on." Graham Declaration at ¶ 4. The term "time series data," as commonly understood in the business, financial, and economics professions, consists of a series of data pairs, namely a date and a number, for discrete time periods of similar frequency. Id. A classic example of classic example of time series data is the quarterly time series data for U.S. Gross National Product as excerpted below from the U.S. Department of Commerce, Bureau of Economic Analysis, news release January 31, 2007, Gross Domestic Product: Fourth Quarter 2006 (Advance):

2006-Q4, 13487.2
2006-Q3, 13322.6

2006-Q2, 13197.3
2006-Q1, 13008.4
2005-Q4, 12730.5

Graham Declaration at ¶ 7. As can be seen from the above, there are multiple data points, each of which is associated with a point in time.

To support the assertion that Donohue discloses determining whether a remote database is comprised of time series data, the Office Action cites Item 60, fig. 2, fig. 3, col. 10 lines 16 – 58. As discussed in detail below, a close examination of the cited figures and text of Donahue, however, reveals no mention whatsoever of time series data, much less the step of determining whether a remote database is comprised of time series data.

First, the Office Action characterizes Item 60 in fig. 2 and fig. 3 as a "time series table." Office Action at 3. Item 60, however, is simply a list of software updates. See col. 9, lines 51-53. Donohue discloses the specific types of information contained in list 60, none of which has anything to do with time:

> The entries in the software updates list 60 include for each software product version 110 an identification 120 of the software resources required for applying the update and an identification 130 of its prerequisite software products and their version numbers. In some cases, the required resources are complete replacement versions of software and associated installation instructions, and deletion instructions for the software being replaced. In other cases, the resources comprise patch code for modifying an existing program (e.g., for error correction) and the patch's installation instructions.

Col. 9, line 59-col. 10, line 2.

Second, the Office Action's reliance on col. 10 lines 16 –58 to support the assertion that Donohue discloses the step of determining whether a remote database is comprised of time series data is misplaced. The entire text of col. 10 lines 16 –58 is reproduced below:

> The operation of an updater component will now be described, with reference to FIGS. 3 and 4. When an installed updater component executes, in response to completion of a cycle period or in response to a request from another software

> product's updater component, its first action is to initiate 200 a search for available updates to the particular software product. It provides to one or more search engines 90 search arguments comprising the product identifier and product version release number obtained by the updater component at install time. Software vendors wishing to benefit from the services of the updater component provide via their Web sites a list 60 of available product updates referenced by product identifier and release number 110 (or some other consistent naming convention is used). The search identifies the relevant Web site 140 on which the update information is available. A URL identifying the relevant Web site 140 for update information is returned 210 to the updater component as a result of the search. If the initial attempt to start a search engine is unsuccessful, then the updater component will attempt to start a different search engine (which may be in a different geographical location to the first), but in alternative embodiments could wait for a preset time period and then retry.
>
> The updater component uses the URL to access 220 the list 60 and downloads 230 a file 160 comprising the portion of the list 60 of available updates which relates to the particular product. The updater component then performs steps 240-280 as shown in FIG. 4. Each file 160 contains message digests (e.g. MD5) which are digitally signed. The retrieved file 160 is then analyzed 240 using a digital signature checking algorithm (such as the algorithm described in U.S. Pat. No. 5,231,668). This verifies that the file 160 represents the correct software updates list for the particular software product, and that the file has not been tampered with since signing. Also, checking for the digital signature is a useful way of filtering the results of the search since these may include a plurality of Web page URLs other than the correct one (the search may find other pages which have a reference to the named product version, including pages not published by the software vendor). If an attempt to download and verify a file is not successful, then the updater component moves on to the next URL found in the search.

Clearly, nowhere in col. 10 lines 16–58 is there any disclosure of the step of determining whether a remote database is comprised of time series data. Rather, it discloses a process for updating software components, which includes searching for available updates for a particular software component, downloading a file comprising a list of available updates for the particular software component and verifying that the downloaded list is the correct list of available software updates. Again, nowhere in the cited passage, or elsewhere in Donohue, is there any disclosure of determining whether the specific information being searched for is time series data. Indeed, the phrase "time series" is not found anywhere in the drawings or text of Donahue. This is a well-

known, well understood and accepted term for a series of data pairs consisting of a data point and an associated point in time, which is defined and/or referenced in over 9,000 texts (according to a Google Book search) relating to data analysis and data management. Graham Declaration ¶ 8. Given the ubiquitous use of the term in the art, if Donohue had intended to disclose determining whether a database is comprised of "time series" data, he would have said so. Id.

The Office Action also asserts that Donohue discloses the step of searching for at least one remote database accessible via a network of computer systems. To support this assertion, and ignoring the ordinary meaning of the words, the Office Action asserts that Donohue's reference to a "resource location" or "web site" is a reference to a "remote database." Office Action at p. 3. It is incorrect to equate the "resource location" or "web site" of Donohue with the "remote database" of the present invention. A "resource location" is nothing more than information about the location of a computer resource. As is well known in the art, a "database" is a collection of information organized in such a way that a computer program can quickly select desired pieces of data.[1] As is also well known in the art, a "web site" is a site or location on the World Wide Web,[2] and the World Wide Web is a system of Internet servers that support specially HTML formatted documents[3].

The Office Action also asserts that Donohue discloses the step of storing location information for each remote database found during search if the remote database is comprised of the desired type of data. Office Action at 3. To support this assertion the Office Action cites col. 10, lines 39–58 and Fig. 3, item 230. Col. 10, lines 39-58 of Donohue, which is set forth below, makes no mention of storing location information:

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[1] http://www.webopedia.com/TERM/d/database.html
[2] http://www.webopedia.com/TERM/w/web_site.html
[3] http://www.webopedia.com/TERM/w/World_Wide_Web.html

> The updater component uses the URL to access 220 the list 60 and downloads 230 a file 160 comprising the portion of the list 60 of available updates which relates to the particular product. The updater component then performs steps 240-280 as shown in FIG. 4. Each file 160 contains message digests (e.g. MD5) which are digitally signed. The retrieved file 160 is then analyzed 240 using a digital signature checking algorithm (such as the algorithm described in U.S. Pat. No. 5,231,668). This verifies that the file 160 represents the correct software updates list for the particular software product, and that the file has not been tampered with since signing. Also, checking for the digital signature is a useful way of filtering the results of the search since these may include a plurality of Web page URLs other than the correct one (the search may find other pages which have a reference to the named product version, including pages not published by the software vendor). If an attempt to download and verify a file is not successful, then the updater component moves on to the next URL found in the search.

It is simply a mischaracterization of the reference to assert that this passage discloses "storing location information." The URL is used to access the list 60. The list is then downloaded. Nowhere does Donohue suggest that the URL is stored. The present invention advantageously stores location information, as opposed to the data itself, to minimize resources necessary for storing data. Donohue, however, discloses downloading the data itself, which must be stored, not location information.

To summarize, Donohue does not disclose any of the limitations of Claim 1. Again, Donohue discloses a method and mechanism for automatic updating of computer programs and synchronising updates of computer programs and their pre-requisite programs to maintain interoperability. Donohue has no disclosure whatsoever of searching for at least one remote database accessible via a network of computer systems, determining whether each remote database found during the searching is comprised of the desired type of data, wherein the desired type of data is time series data, and storing location information for each remote database found during the searching if the remote database is comprised of the desired type of data.

Claims 2-13, 15-31, 33, 35-48 all depend on Claim 1 and are allowable because Claim 1 is allowable.

With respect to independent Claim 49, Donohue does not disclose a computer-implemented method of identifying one or more remote databases that contain a desired type of data that includes the step of storing an indication of whether each remote database found during the searching is comprised of the desired type of data, wherein the desired type of data is time series data.

With respect to Claim 50, Donohue does not disclose a memory for storing information relating to at least one remote database accessible via a network of computer systems, the at least one remote database being comprised of a desired type of data, the memory comprising a data structure that includes location information for at least one remote database, the location information being stored if the at least one remote database is comprised of the desired type of data, wherein the desired type of data is time series data. Claims 51-52, 54-58 and 60-67 all depend on Claim 50 and are allowable because Claim 50 is allowable.

Independent Claim 68 is directed to a computer readable media comprising software for instructing a computer system to determine whether each remote database found during the searching is comprised of the desired type of data, wherein the desired type of data is time series data. Claim 68, therefore, is allowable over the cited prior art for the same reasons that Claim 1 is allowable. In addition, Donohue does not disclose a computer readable medium comprising software for instructing a computer to determine whether each remote database found during the searching is comprised of the desired type of data, wherein the desired type of data is time series data.

With respect to Claim 69, Donohue does not disclose a computerized apparatus for locating one or more remote databases containing a desired type of data wherein location information is stored in a computer if a remote database is comprised of the desired type of data, wherein the desired type of data is time series data.

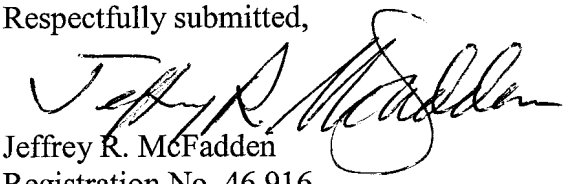
Certain of the Claims that depend on Claims 1 and 50 are allowable for the following additional reasons. With respect to Claim 38-40, the cited passages from Donohue (fig. 2, col. 9, lines 33-65) do not disclose the steps of determining whether the time series of data is redundant of a series of data for which information has already been stored (Claim 38), not storing information about the time series of data if the time series of data is redundant of a series of data for which information has already been stored (Claim 39), and storing information about the time series of data if the time series of data is not redundant of a series of data for which information has already been stored (Claim 40).

With respect to Claim 41, the cited passages of Donohue (fig. 3, col. 9, lines 42-67 to col. 10 lines 1-58) do not disclose the steps of "determining whether a correlation exists between at least some of the data of the desired type contained in the at least one remote database and at least some of the data of the desired type contained in a predefined data set, and if the correlation exists, storing an indication of the correlation in association with the stored location information for the at least one remote database."

Conclusion

Applicants believe that this case is now in condition for an immediate allowance, and such action is respectfully requested. If any issue remains unresolved, Applicants' counsel would appreciate the opportunity for a telephone interview to expedite allowance.

Respectfully submitted,



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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Graham, et al.
Serial No.: 09/703,941
Filed: November 1, 2000

Examiner: Woo, Issac M.
Art Unit: 2172
Confirmation No.: 4046

For: **SYSTEM AND METHOD FOR DATA COLLECTION, MANAGEMENT AND ANALYSIS**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313

Sir:

DECLARATION OF DOUGLAS A. GRAHAM UNDER 35 U.S.C. 1.132

1. My name is Douglas A. Graham, I am a co-inventor of the invention disclosed and claimed in the above-referenced application, and I submit this declaration in support thereof.

2. I am currently employed as Manager and President of Macro*World Research, a subsidiary of Wachovia Corporation. My academic background is in the field of data analysis theory, having received a Bachelor of Science degree in Mathematics in 1968 from Jacksonville University, and a Masters of Science degree in Engineering with concentration in Operations Research in 1972 from the University of Florida. I have also studied quantitative business models while pursuing a Ph.D. in business administration at the University of Florida. My academic and professional work over nearly four decades has encompassed many hundreds of analyses covering all types of micro-economic level of individual company financial and economic data time series, national level economic time series data, and global data time series modeling covering foreign countries and international trade flows.

3. I understand that the claims of the above-referenced application have been rejected as being anticipated by U.S. Patent No. 6,202,207 to Donohue. More specifically, I understand that the Examiner has taken the position that Donohue discloses the step of determining whether each remote database found during the searching is comprised of the desired type of data, wherein the desired type of data is time series data. I further understand that the Examiner is relying on Item 60 in Figures 2 and 3, and col. 10 lines 16 –58 to support the assertion that Donohue discloses the step of determining whether each remote database found during the searching is comprised of the desired type of data, wherein the desired type of data is time series data.

4. Based on my education and experience, the phrase "time series data" is understood to mean a data set having multiple data points, each of which is associated with a point in time. This is discussed in the Specification at p. 5, lines 18-20. This definition is consistent with the leading treatises on statistics and forecasting. For example, in Time Series: Theory and Methods, Second Edition (1996), Peter J. Brockwell and Richard A. Davis, Chapter 1, Stationary Time Series, 1.1 Examples of Time Series, page 1, defines a "time series" as follows: "A time series is a set of observations **X***t*, each one being recorded at a specified time *t*." Another example is The Analysis of Time Series, An Introduction, Sixth Edition (2004), Chris Chatfield, Chapter 1, Introduction, 1.1 Some Representative Time Series, page 1, states as follows: "A time series is a collection of observations made sequentially through time." "Many time series are routinely recorded in economics and finance. Examples include share prices on successive days, export totals in successive months, average incomes in successive months, company profits in successive years, and so on." So, in essence, the term "time series data," as commonly

understood in the business, financial, and economics professions, consists of a series of data pairs, namely a date and a number, for discrete time periods of similar frequency.

5. I have reviewed the Figures and text in Donohue cited by the Examiner to support the assertion that Donohue discloses the step of determining whether each remote database found during the searching is comprised of the desired type of data, wherein the desired type of data is time series data. First, the Office Action mischaracterizes and relies on Item 60, which is shown in Fig. 2 and Fig. 3 of Donohue. The specification in Donohue describes Item 60 as follows:

> The entries in the software updates list 60 include for each software product version 110 an identification 120 of the software resources required for applying the update and an identification 130 of its prerequisite software products and their version numbers. In some cases, the required resources are complete replacement versions of software and associated installation instructions, and deletion instructions for the software being replaced. In other cases, the resources comprise patch code for modifying an existing program (e.g., for error correction) and the patch's installation instructions.

Col. 9, line 59-col. 10, line 2.

6. The Examiner, however, has characterized Item 60 as a "time series table." Office Action at 3. Item 60 is simply a list of software updates 120. See col. 9, lines 51-53. It also includes information about the Product Set 110 to which the software update 120 relates, and the prerequisites 130 for each software update 120. Item 60 does not contain any data point that is associated with a point in time.

7. In contrast, I respectfully direct the Examiner's attention to a classic example of time series data, namely, a quarterly time series data for U.S. Gross National Product as excerpted below from the U.S. Department of Commerce, Bureau of Economic Analysis, news release January 31, 2007, Gross Domestic Product: Fourth Quarter 2006 (Advance):

2006-Q4, 13487.2
2006-Q3, 13322.6
2006-Q2, 13197.3
2006-Q1, 13008.4
2005-Q4, 12730.5.

As can be seen from the above, there are multiple data points, each of which is associated with a point in time.

8. The Office Action also relies on Col. 10 lines 16 –58 of Donohue to support the incorrect assertion that Donohue discloses the step of determining whether a remote database is comprised of time series data. The entire text of col. 10 lines 16 –58 is reproduced below:

> The operation of an updater component will now be described, with reference to FIGS. 3 and 4. When an installed updater component executes, in response to completion of a cycle period or in response to a request from another software product's updater component, its first action is to initiate 200 a search for available updates to the particular software product. It provides to one or more search engines 90 search arguments comprising the product identifier and product version release number obtained by the updater component at install time. Software vendors wishing to benefit from the services of the updater component provide via their Web sites a list 60 of available product updates referenced by product identifier and release number 110 (or some other consistent naming convention is used). The search identifies the relevant Web site 140 on which the update information is available. A URL identifying the relevant Web site 140 for update information is returned 210 to the updater component as a result of the search. If the initial attempt to start a search engine is unsuccessful, then the updater component will attempt to start a different search engine (which may be in a different geographical location to the first), but in alternative embodiments could wait for a preset time period and then retry.
>
> The updater component uses the URL to access 220 the list 60 and downloads 230 a file 160 comprising the portion of the list 60 of available updates which relates to the particular product. The updater component then performs steps 240-280 as shown in FIG. 4. Each file 160 contains message digests (e.g. MD5) which are digitally signed. The retrieved file 160 is then analyzed 240 using a digital signature checking algorithm (such as the algorithm described in U.S. Pat. No. 5,231,668). This verifies that the file 160 represents the correct software updates list for the

> particular software product, and that the file has not been tampered with since signing. Also, checking for the digital signature is a useful way of filtering the results of the search since these may include a plurality of Web page URLs other than the correct one (the search may find other pages which have a reference to the named product version, including pages not published by the software vendor). If an attempt to download and verify a file is not successful, then the updater component moves on to the next URL found in the search.

Nowhere in col. 10 lines 16–58 is there any disclosure of the step of determining whether a remote database is comprised of time series data. Rather, it discloses a process for updating software components, which includes searching for available updates for a particular software component, downloading a file comprising a list of available updates for the particular software component and verifying that the downloaded list is the correct list of available software updates. Again, nowhere in the cited passage, or elsewhere in Donohue, is there any disclosure of determining whether the specific information being searched for is time series data. Indeed, there is no mention of the terms "time series data" or "time-series data" anywhere in Donohue. This is a well-known, well understood and accepted term for a series of data pairs consisting of a data point and an associated point in time, which is defined and/or referenced in over 9,000 texts (according to a Google Book search) relating to data analysis and data management. Given the ubiquitous use of the term in the art, if Donohue had intended to disclose determining whether a database is comprised of "time series" data, he would have said so.

9. I hereby declare that all statements made herein of my own knowledge are true and that any statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the

United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

This is the 19th day of March 2007.

Douglas A. Graham